

STIC-EIC1600/2900

281203

From: SHOBHA KANTAMNENI [shobha.kantamnani@uspto.gov]**Sent:** Monday, December 22, 2008 9:43 AM**To:** STIC-EIC1600/2900**Subject:** Search Request, Case/Application No.: 10/719588**Requester:** SHOBHA KANTAMNENI (P/1617)**Art Unit:** GROUP ART UNIT 1617**Employee Number:****Office Location:** REM 4A5**Phone Number:** (571)272-2930**Case/Application number:** 10/719588**Priority Filing Date:****Format for Search Results:** No selection**Meaning of unusual acronyms or initialisms:**

Identify the novelty:

Additional comments:

Please, do structure search for compounds of formula (III), and formula (IV). Include closely related geminal-dialkyl substituted compounds.

Attachment: Yes (719588, Claims, Whole Document.pdf)

12/22/2008

=> d ibib abs hitstr l13 1-5

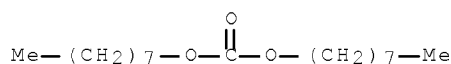
L13 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2005:209520 HCAPLUS Full-text
 DOCUMENT NUMBER: 142:284790
 TITLE: Emollient mixture for cosmetic
 formulations containing dialkyl carbonates and acyclic
 alkanes
 INVENTOR(S): Issberner, Ulrich; Kawa, Rolf; Mitchell, Catherine;
 Ansmann, Achim; Jackwerth, Bettina
 PATENT ASSIGNEE(S): Cognis Deutschland GmbH & Co. Kg, Germany
 SOURCE: Eur. Pat. Appl., 10 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1512392	A1	20050309	EP 2004-20127	20040825
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
DE 10341025	A1	20050331	DE 2003-10341025	20030903
US 20050079986	A1	20050414	US 2004-926629	20040826
JP 2005075833	A	20050324	JP 2004-255549	20040902
PRIORITY APPLN. INFO.:			DE 2003-10341025	A 20030903

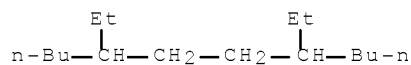
AB The invention concerns water-free compns. that are liquid at 20°C and normal pressure and that contain (a) 20-90 weight/weight% linear or branched dialkyl carbonates and (b) 2-95 weight/weight% C8-C40 acyclic alkanes. The compns. do not contain addnl. oils or waxes and are free of silicone oils. Selected ingredients are (a) di-n-octylcarbonate and (b) diethyldodecane, didecene or any isomere mixture of the compds.

IT 1680-31-5, Dioctylcarbonate 24251-86-3,
 5,8-Diethyldodecane
 RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
 (emollient mixture for cosmetic formulations containing
 dialkyl carbonates and acyclic alkanes)

RN 1680-31-5 HCAPLUS
 CN Carbonic acid, dioctyl ester (CA INDEX NAME)



RN 24251-86-3 HCAPLUS
 CN Dodecane, 5,8-diethyl- (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

10/719,588

L13 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:800775 HCAPLUS Full-text

DOCUMENT NUMBER: 141:319525

TITLE: Emollient mixtures for use as petroleum mineral oil replacements in cosmetics

INVENTOR(S): Bruening, Stefan; Ansmann, Achim; Jackwerth, Bettina; Dee, Gary

PATENT ASSIGNEE(S): Cognis Deutschland GmbH & Co. KG, Germany

SOURCE: Ger. Offen., 5 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

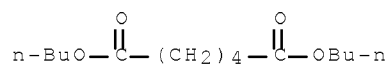
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

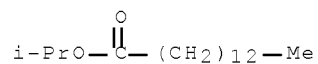
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10312352	A1	20040930	DE 2003-10312352	20030320
WO 2004082641	A1	20040930	WO 2004-EP2495	20040311
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1603516	A1	20051214	EP 2004-719386	20040311
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
JP 2006520350	T	20060907	JP 2006-504634	20040311
US 20060280709	A1	20061214	US 2006-549953	20060803
PRIORITY APPLN. INFO.:			DE 2003-10312352	A 20030320
			WO 2004-EP2495	W 20040311
AB	The invention concerns emollient mixts. for the replacement of petroleum mineral oil in cosmetics; the emollients contain esters of C8-C18 fatty acids with C3-C12 alcs., esters of adipinic acid and C3-C12 alcs. in combination with poly-alpha-olefins, while the amount of esters is 10-90 weight/weight% of the total amount of ester and polyalpha olefins. Thus and emollient contained (weight/weight%): Cetiol OC 50; Synfluid PAO 50.			
IT	105-99-7, Dibutyl adipate 110-27-0, Isopropyl myristate 124-04-9D, Hexanedioic acid, esters with C3-C12 alcs. 142-91-6, Isopropyl palmitate 2425-77-6, 2-Hexyldecanol 3913-02-8, 2-Butyloctanol 5333-42-6, Eutanol G 17438-89-0, 1-Decene dimer 22047-49-0, 2-Ethylhexyl stearate 29806-73-3, 2-Ethylhexyl palmitate 62132-67-6, 1-Dodecene dimer 110225-00-8, Eutanol G 16 765923-35-1, Synfluid PAO 2cSt			
RL:	COS (Cosmetic use); BIOL (Biological study); USES (Uses) (emollient mixts. for use as petroleum mineral oil replacements in cosmetics)			
RN	105-99-7 HCAPLUS			
CN	Hexanedioic acid, 1,6-dibutyl ester (CA INDEX NAME)			

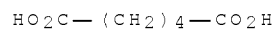
10/719,588



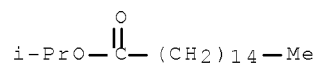
RN 110-27-0 HCAPLUS
CN Tetradecanoic acid, 1-methylethyl ester (CA INDEX NAME)



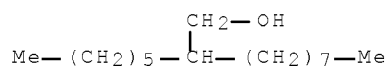
RN 124-04-9 HCAPLUS
CN Hexanedioic acid (CA INDEX NAME)



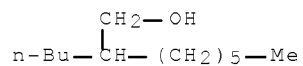
RN 142-91-6 HCAPLUS
CN Hexadecanoic acid, 1-methylethyl ester (CA INDEX NAME)



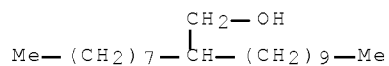
RN 2425-77-6 HCAPLUS
CN 1-Decanol, 2-hexyl- (CA INDEX NAME)



RN 3913-02-8 HCAPLUS
CN 1-Octanol, 2-butyl- (CA INDEX NAME)



RN 5333-42-6 HCAPLUS
CN 1-Dodecanol, 2-octyl- (CA INDEX NAME)



RN 17438-89-0 HCAPLUS

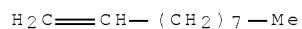
10/719,588

CN 1-Decene, dimer (CA INDEX NAME)

CM 1

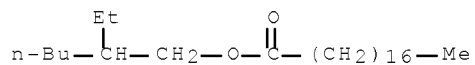
CRN 872-05-9

CMF C10 H20



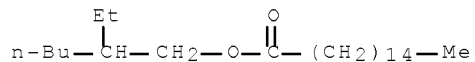
RN 22047-49-0 HCAPLUS

CN Octadecanoic acid, 2-ethylhexyl ester (CA INDEX NAME)



RN 29806-73-3 HCAPLUS

CN Hexadecanoic acid, 2-ethylhexyl ester (CA INDEX NAME)



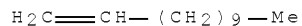
RN 62132-67-6 HCAPLUS

CN 1-Dodecene, dimer (CA INDEX NAME)

CM 1

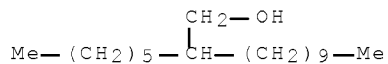
CRN 112-41-4

CMF C12 H24



RN 110225-00-8 HCAPLUS

CN 1-Dodecanol, 2-hexyl- (CA INDEX NAME)



RN 765923-35-1 HCAPLUS

CN Synfluid PAO 2cSt (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L13 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:467310 HCAPLUS Full-text

10/719,588

DOCUMENT NUMBER: 139:41466
 TITLE: Cosmetic and pharmaceutical emollients containing 2-methyl-1,3-propanediol diesters
 INVENTOR(S): Prinz, Daniela; Westfechtel, Alfred
 PATENT ASSIGNEE(S): Cognis Deutschland G.m.b.H. & Co. K.-G., Germany
 SOURCE: Ger. Offen., 12 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10160682	A1	20030618	DE 2001-10160682	20011211
WO 2003053373	A2	20030703	WO 2002-EP13695	20021204
WO 2003053373	A3	20040115		
W: AU, BR, CA, CN, JP, KR, MX, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR				
AU 2002364280	A1	20030709	AU 2002-364280	20021204
EP 1453473	A2	20040908	EP 2002-799052	20021204
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005516019	T	20050602	JP 2003-554133	20021204
US 20050019353	A1	20050127	US 2004-498599	20040610
PRIORITY APPLN. INFO.:			DE 2001-10160682	A 20011211
			WO 2002-EP13695	W 20021204

OTHER SOURCE(S): MARPAT 139:41466

AB The invention concerns emollients for cosmetic and pharmaceutical applications that contain 2-methyl-1,3-propanediol diesters, especially 2-Methyl-1,3-Propanediol dilauryl ester. 2-Methyl-1,3-Propanediol is esterified with the carboxylic acid in the presence of tin oxide catalyst, the product is filtered and purified by distillation. Emollient compns. contain (weight/weight%): 2-methyl-1,3-propanediol diesters 0.1-50; surfactants, emulsifiers, coemulsifiers 0.1-20; oily bodies 0.1-40; water 0-98.

IT 7732-18-5, Water, biological studies
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (cosmetic and pharmaceutical emollients containing 2-Me-1,3-propanediol diesters)

RN 7732-18-5 HCAPLUS
 CN Water (CA INDEX NAME)

H₂O

IT 1332-29-2, Tin oxide
 RL: CAT (Catalyst use); USES (Uses) (cosmetic and pharmaceutical emollients containing 2-Me-1,3-propanediol diesters)

RN 1332-29-2 HCAPLUS
 CN Tin oxide (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

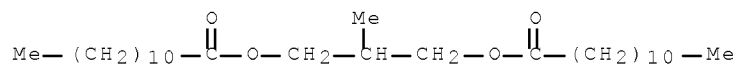
IT 540730-50-5P
 RL: COS (Cosmetic use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

10/719,588

(cosmetic and pharmaceutical emollients containing
2-Me-1,3-propanediol diesters)

RN 540730-50-5 HCAPLUS

CN Dodecanoic acid, 2-methyl-1,3-propanediyl ester (9CI) (CA INDEX NAME)



IT 2163-42-0D, 2-Methyl-1,3-Propanediol, diesters

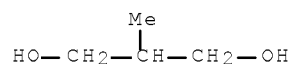
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);

USES (Uses)

(cosmetic and pharmaceutical emollients containing
2-Me-1,3-propanediol diesters)

RN 2163-42-0 HCAPLUS

CN 1,3-Propanediol, 2-methyl- (CA INDEX NAME)



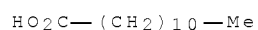
IT 143-07-7, Lauric acid, reactions 2163-42-0,
2-Methyl-1,3-Propanediol

RL: RCT (Reactant); RACT (Reactant or reagent)

(cosmetic and pharmaceutical emollients containing
2-Me-1,3-propanediol diesters)

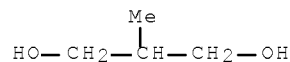
RN 143-07-7 HCAPLUS

CN Dodecanoic acid (CA INDEX NAME)



RN 2163-42-0 HCAPLUS

CN 1,3-Propanediol, 2-methyl- (CA INDEX NAME)



L13 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:467309 HCAPLUS Full-text

DOCUMENT NUMBER: 139:41465

TITLE: Cosmetic and pharmaceutical
emollients containing 2-methyl-1,3-propanediol
monoesters

INVENTOR(S): Prinz, Daniela; Westfechtel, Alfred
; Seipel, Werner

PATENT ASSIGNEE(S): Cognis Deutschland G.m.b.H. & Co. K.-G., Germany

SOURCE: Ger. Offen., 12 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10160681	A1	20030618	DE 2001-10160681	20011211
WO 2003053907	A1	20030703	WO 2002-EP13694	20021204
W: AU, BR, CA, CN, JP, KR, MX, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR				
AU 2002358594	A1	20030709	AU 2002-358594	20021204
EP 1472211	A1	20041103	EP 2002-792879	20021204
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, CY, TR, BG, CZ, EE, SK				
JP 2005513121	T	20050512	JP 2003-554624	20021204
US 20050089497	A1	20050428	US 2004-498664	20040610
PRIORITY APPLN. INFO.:			DE 2001-10160681	A 20011211
			WO 2002-EP13694	W 20021204

OTHER SOURCE(S): MARPAT 139:41465

AB The invention concerns emollients for cosmetic and pharmaceutical applications that contain 2-methyl-1,3-propanediol monoesters, especially 2-Methyl-1,3-Propanediol lauryl monoester. 2-Methyl-1,3-Propanediol is esterified with the carboxylic acid in the presence of tin oxide catalyst, the product is filtered and purified by distillation. Emollient compns. contain (weight/weight%): 2-methyl-1,3-propanediol monoesters 0.1-50; surfactants, emulsifiers, coemulsifiers 0.1-20; oily bodies 0.1-40; water 0-98.

IT 1332-29-2, Tin oxide 7732-18-5, Water, uses
 RL: CAT (Catalyst use); USES (Uses)
 (cosmetic and pharmaceutical emollients containing 2-Me-1,3-propanediol monoesters)

RN 1332-29-2 HCAPLUS

CN Tin oxide (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 7732-18-5 HCAPLUS

CN Water (CA INDEX NAME)

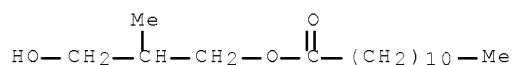
H₂O

IT 540731-01-9P

RL: COS (Cosmetic use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (cosmetic and pharmaceutical emollients containing 2-Me-1,3-propanediol monoesters)

RN 540731-01-9 HCAPLUS

CN Dodecanoic acid, 3-hydroxy-2-methylpropyl ester (CA INDEX NAME)



IT 2163-42-0D, 2-Methyl-1,3-Propanediol, diesters

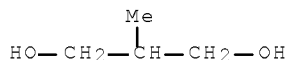
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);

USES (Uses)

(cosmetic and pharmaceutical emollients containing
2-Me-1,3-propanediol monoesters)

RN 2163-42-0 HCAPLUS

CN 1,3-Propanediol, 2-methyl- (CA INDEX NAME)



IT 143-07-7, Lauric acid, reactions 2163-42-0,

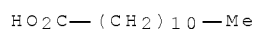
2-Methyl-1,3-Propanediol

RL: RCT (Reactant); RACT (Reactant or reagent)

(cosmetic and pharmaceutical emollients containing
2-Me-1,3-propanediol monoesters)

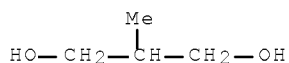
RN 143-07-7 HCAPLUS

CN Dodecanoic acid (CA INDEX NAME)



RN 2163-42-0 HCAPLUS

CN 1,3-Propanediol, 2-methyl- (CA INDEX NAME)



L13 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:686912 HCAPLUS Full-text

DOCUMENT NUMBER: 115:286912

ORIGINAL REFERENCE NO.: 115:48597a,48600a

TITLE: Cosmetic water-in-oil emulsions. How to
formulate elegant skin care products

AUTHOR(S): Ansmann, Achim; Kawa, Rolf

CORPORATE SOURCE: Henkel K.-G.a.A., Duesseldorf, W-4000/1, Germany

SOURCE: Seifen, Oele, Fette, Wachse (1991), 117(10), 369-71
CODEN: SOFWAF; ISSN: 0173-5500

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The influence of emollients and novel water-in-oil (w/o) emulsifiers on the viscosities and stabilities of w/o emulsions for cosmetic creams and lotions was investigated. For the creams, viscosity correlated with the viscosity and mol. masses of the emollients, yet surprisingly stability decreased with increasing viscosity; a consequence of an unfavorable ratio of the mol. mass of the emollient (e.g. Myritol 318, Cetiol J600) to the emulsifiers (Monomuls 90-018, Lameform TGI) employed. The addnl. deployment of Dehymuls FCE (dicocyl pentaerythrityl distearyl citrate as a high-mol.-weight coemulsifier, however, resulted in improved stability. For lotions employing Dehymuls HRE 7 (PEG 7-hydrogenated castor oil) as emulsifier, viscosity again correlated with the mol. weight of the emollient, yet stability was only correlated with emollient polarity; destabilization occurred if the lipophilic part of the

10/719,588

emulsifier was unable to aggregate in its appropriate configuration.

Emollients or mixts. thereof with medium polarity (e.g. Cetiol LC) gave w/o lotions with excellent stability.

IT 112-10-7, Emerest 2310 142-91-6 5333-42-6,
Eutanol G 17673-56-2, Cetiol J 600 22047-49-0, Cetiol
868 29806-73-3, Cegesoft C 24 34316-64-8, Cetiol A
52623-82-2, Cetiol LC 68171-38-0, Emerest 2384
137802-13-2, Cetiol SN

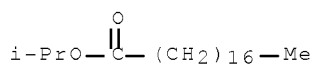
RL: BIOL (Biological study)

(cosmetic emollient, water-in-oil emulsion-based

creams and lotions containing, viscosity and stability of, mol. weight and polarity in relation to)

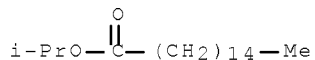
RN 112-10-7 HCAPLUS

CN Octadecanoic acid, 1-methylethyl ester (CA INDEX NAME)



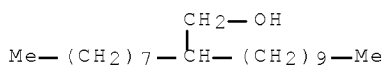
RN 142-91-6 HCAPLUS

CN Hexadecanoic acid, 1-methylethyl ester (CA INDEX NAME)



RN 5333-42-6 HCAPLUS

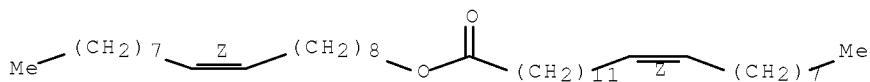
CN 1-Dodecanol, 2-octyl- (CA INDEX NAME)



RN 17673-56-2 HCAPLUS

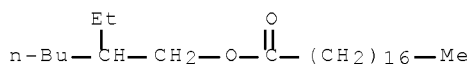
CN 13-Docosenoic acid, (9Z)-9-octadecen-1-yl ester, (13Z)- (CA INDEX NAME)

Double bond geometry as shown.



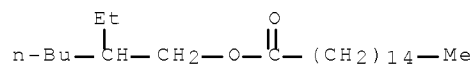
RN 22047-49-0 HCAPLUS

CN Octadecanoic acid, 2-ethylhexyl ester (CA INDEX NAME)

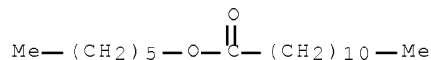


10/719,588

RN 29806-73-3 HCAPLUS
CN Hexadecanoic acid, 2-ethylhexyl ester (CA INDEX NAME)



RN 34316-64-8 HCAPLUS
CN Dodecanoic acid, hexyl ester (CA INDEX NAME)



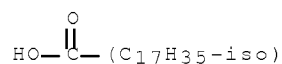
RN 52623-82-2 HCAPLUS
CN Cetiol LC (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 68171-38-0 HCAPLUS
CN Isooctadecanoic acid, monoester with 1,2-propanediol (CA INDEX NAME)

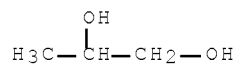
CM 1

CRN 30399-84-9
CMF C18 H36 O2
CCI IDS



CM 2

CRN 57-55-6
CMF C3 H8 O2



RN 137802-13-2 HCAPLUS
CN Cetiol SN (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 137802-27-8, Dehymuls FCE
RL: BIOL (Biological study)
(cosmetic water-in-oil emulsion-based creams stabilization
with, emollient mol. weight in relation to)

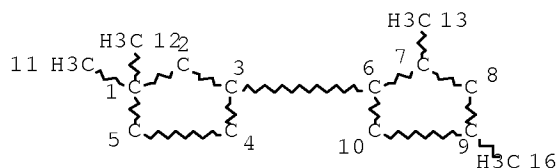
RN 137802-27-8 HCAPLUS
CN Dehymuls FCE (9CI) (CA INDEX NAME)

10/719,588

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RESULTS FROM REGISTRY AND CAPLUS

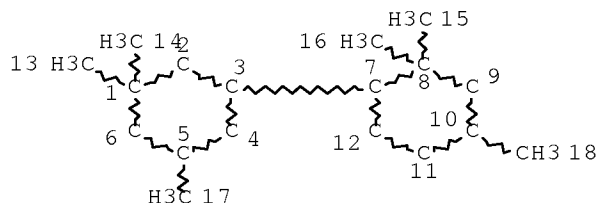
=> d que stat l27
L17 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE
L19 4 SEA FILE=REGISTRY SSS FUL L17
L23 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE
L25 7 SEA FILE=REGISTRY SSS FUL L23
L26 11 SEA FILE=REGISTRY ABB=ON L19 OR L25
L27 6 SEA FILE=HCAPLUS ABB=ON L26

=> d ibib abs hitstr l27 1-6

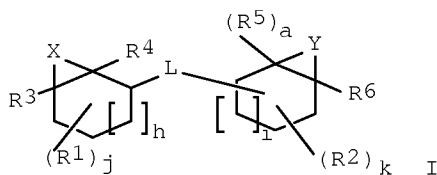
L27 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:1005999 HCAPLUS [Full-text](#)
DOCUMENT NUMBER: 145:377978
TITLE: Active ray-curable composition having good storage stability and sensitivity, polymerization method, active ray-curable ink, image-forming method and ink jet recorder
INVENTOR(S): Ookubo, Kimihiko; Miura, Norio; Kurata, Takeshi

10/719,588

PATENT ASSIGNEE(S): Konica Minolta Medical & Graphic, Inc., Japan
 SOURCE: PCT Int. Appl., 114pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 2006100978	A1	20060928	WO 2006-JP305110	20060315
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRIORITY APPLN. INFO.: JP 2005-79198 A 20050318
 OTHER SOURCE(S): MARPAT 145:377978
 GI



AB The composition can give a cured film having sufficiently high hardness both before and after long-term storage in various environments, particularly in highly humid atmospheric. The active ray-curable composition contains a compound represented by the formula I (X, Y = O, S; L = direct bond or linking group; R3, R4, R5, R6 = H, alkyl; R1, R2 = substituent group; h, i = 0, 1 or 2; j, k = 0-9; a = 0, 1; when a = 0 then L connects to C atom substituted by R5). The composition is useful for ink-jet ink with good printability and storage stability. Thus, stirring 10 g di(5,5-dimethyl-2,3-epoxycyclohexane) with 1 g trifluoromethanesulfonic acid in 20 mL dichloroethane while heating at reflux under N for 30 min, adding 2 g triethylamine to stop the reaction, precipitating the reaction product with 20 mL MeOH and isolating gave a radiation-curable resin.

IT 910796-01-9P 910796-20-2P 910796-33-7P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(manufacture of highly sensitive and storage-stable cyclic epoxy resins for radiation-curable ink-jet inks with good printability)

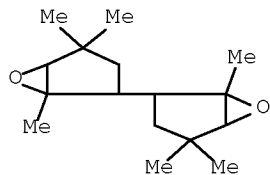
RN 910796-01-9 HCAPLUS

CN 2,2'-Bi-6-oxabicyclo[3.1.0]hexane, 1,1',4,4,4',4'-hexamethyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 910796-00-8

CMF C16 H26 O2



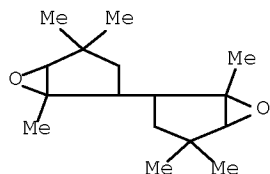
RN 910796-20-2 HCAPLUS

CN 2,2'-Bi-6-oxabicyclo[3.1.0]hexane, 1,1',4,4,4',4'-hexamethyl-, polymer
with 3-ethyl-3-[[2-ethylhexyl)oxy)methyl]oxetane (9CI) (CA INDEX NAME)

CM 1

CRN 910796-00-8

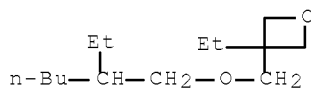
CMF C16 H26 O2



CM 2

CRN 298695-60-0

CMF C14 H28 O2



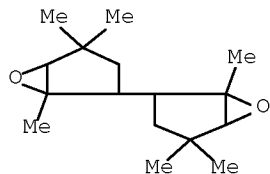
RN 910796-33-7 HCAPLUS

CN 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 6-methyl-, 2-ethylhexyl
ester, polymer with 1,1',4,4,4',4'-hexamethyl-2,2'-bi-6-
oxabicyclo[3.1.0]hexane and 3,3'-[oxybis(methylene)]bis[3-ethyloxetane]
(9CI) (CA INDEX NAME)

CM 1

CRN 910796-00-8

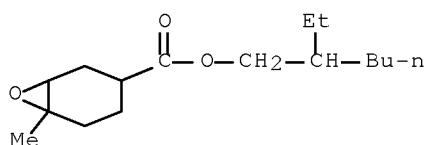
CMF C16 H26 O2



CM 2

CRN 865364-47-2

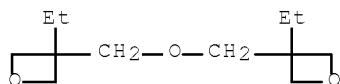
CMF C16 H28 O3



CM 3

CRN 18934-00-4

CMF C12 H22 O3



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:721217 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 134:17609

TITLE: A concise preparation of yuehchukene and its analogues

AUTHOR(S): Ishikura, Minoru; Imaizumi, Katsuaki; Katagiri, Nobuya

CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Health Sciences
University of Hokkaido, Hokkaido, 061-0293, Japan

SOURCE: Heterocycles (2000), 53(10), 2201-2220

CODEN: HTCYAM; ISSN: 0385-5414

PUBLISHER: Japan Institute of Heterocyclic Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 134:17609

AB The palladium catalyzed carbonylative cross-coupling reaction of indolylborates with vinyl triflates afforded indol-2-yl ketones, which were subsequently converted to hexahydroindeno[2,1-b]indoles with the aid of an acid. This protocol was well adapted for the total synthesis of yuehchukene.

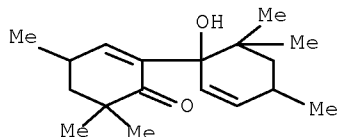
IT 309718-46-5P

10/719,588

RL: SPN (Synthetic preparation); PREP (Preparation)
(concise preparation of yuehchukene and its analogs)

RN 309718-46-5 HCAPLUS

CN 2-Cyclohexen-1-one, 2-(1-hydroxy-4,6,6-trimethyl-2-cyclohexen-1-yl)-4,6,6-trimethyl- (CA INDEX NAME)



REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1976:16961 HCAPLUS Full-text

DOCUMENT NUMBER: 84:16961

ORIGINAL REFERENCE NO.: 84:2791a,2794a

TITLE: Aldol condensates

INVENTOR(S): Koester, Roland; Pourzal, Ali-Akbar

PATENT ASSIGNEE(S): Studiengesellschaft Kohle m.b.H., Fed. Rep. Ger.

SOURCE: Ger. Offen., 25 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2417357	A1	19751016	DE 1974-2417357	19740409
DE 2417357	B2	19760415		
DE 2417357	C3	19761209		
JP 50131915	A	19751018	JP 1974-52761	19740511
CA 1026319	A1	19780214	CA 1974-214407	19741122

PRIORITY APPLN. INFO.: DE 1974-2417357 A 19740409

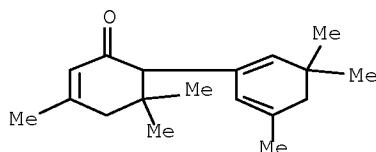
AB Aldol condensations between carbonyl compound components A and B (A = B, A ≠ B) carried out in the presence of R₂BOCOR₁ (R = Et, Pr; R₁ = Me, Et, Ph, etc.) gave 63-98% of dimeric condensation products having ≥95% purity. Thus, EtCOPh reacted in the presence of Et₂BOCOCMe₃ to give 97% dimeric condensation product of 98% purity.

IT 57558-61-9F

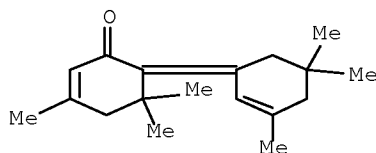
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 57558-61-9 HCAPLUS

CN 2-Cyclohexen-1-one, 3,5,5-trimethyl-6-(3,3,5-trimethyl-1,5-cyclohexadien-1-yl)- (CA INDEX NAME)



L27 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1970:509343 HCAPLUS Full-text
 DOCUMENT NUMBER: 73:109343
 ORIGINAL REFERENCE NO.: 73:17795a,17798a
 TITLE: Unusually stable salt from isophorone and hydrogen bromide
 AUTHOR(S): Marx, John N.
 CORPORATE SOURCE: Dep. of Chem., Texas Tech. Univ., Lubbock, TX, USA
 SOURCE: Tetrahedron Letters (1970), (40), 3517-20
 CODEN: TELEAY; ISSN: 0040-4039
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI For diagram(s), see printed CA Issue.
 AB I is obtained when HBr is passed into neat isophorone, and addnl. HBr gives II. I is stable at room temperature in the absence of moisture and light. I is heated in a sealed tube at 70° to give the dimer, III.
 IT 29770-82-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 29770-82-9 HCAPLUS
 CN 2-Cyclohexen-1-one, 3,5,5-trimethyl-6-(3,5,5-trimethyl-2-cyclohexen-1-ylidene)- (CA INDEX NAME)



L27 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1967:37579 HCAPLUS Full-text
 DOCUMENT NUMBER: 66:37579
 ORIGINAL REFERENCE NO.: 66:7127a,7130a
 TITLE: Condensations of the chloromagnesium derivative of tert-butyl acetate with ketones in ether. III. Synthesis of β -hydroxylated and β,δ -dihydroxylated derivatives in the cyclo-alkane and aromatic series
 AUTHOR(S): Maroni-Barnaud, Yvette; Gilard, Guy; Montalla, Andre; Perry, Marcel; Dubois, Jacques E.
 CORPORATE SOURCE: Lab. Chim. Org. Phys., Paris, Fr.
 SOURCE: Bulletin de la Societe Chimique de France (1966), (10), 3243-9
 CODEN: BSCFAS; ISSN: 0037-8968
 DOCUMENT TYPE: Journal
 LANGUAGE: French
 AB cf. CA 64, 19471e. The chloromagnesium derivative of tert-BuOAc (I) was prepared in situ by mixing 2.25-2.5 moles of iso-PrMgCl with 1 mole I in Et₂O. Addition of 0.5 equivs. (ketone to the mixture and refluxing 2 hrs. gives a β -hydroxy ester $>C(OH)CH_2CO_2Bu$ -tert (II). The following II were prepared (ketone used, % yield of II, and b.p. or m.p. of II given): cyclopentanone (III), 72, b1 71-2°; cyclohexanone (IV), 70, b1 82-3°; 3,3,5-

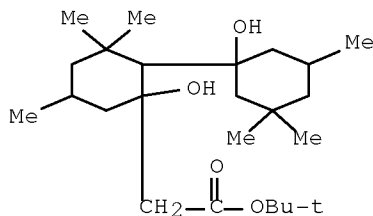
trimethylcyclohexanone (V), 75, b1 93-4°; 4-tert-butylcyclohexane (VI), 45, m. 57°; methone, 68, b1 113-14°; acetophenone (VII), 67, m. 57°; menthone, 68, b1 113-14°; acetophenone (VII), 67, m. 34°; p-methylacetophenone, 66, m. 39°; p-isopropylacetophenone (VIII), 36, b1 121-22°; p-chloroacetophenone (IX), 76, m. 45°; p-methoxyacetophenone (X), 62, m. 34°; propiophenone (XI), 65, b1 108-9°; isobutyrophenone (XII), 66, m. 40°; fluorenone, 60, m. 79°. II in dioxane were hydrolyzed with concentrated HCl to the corresponding acid. Thus were prepared (ketone used, % yield acid, and m.p. acid given): III, 75, 77°; IV, 61, 65°; V 80, 117°; VI, 74, 151°; IX, 45, 112°; XI, 45, 121°; XII, 51, 117°; butyrophenone (XIII), 48, 122°. If the reaction is carried out in one step by refluxing a mixture of ketone, iso-PrMgCl, and I in Et₂O, the principal product is β , δ -dihydroxy ester (XIV). A mechanism is suggested. The following XIV were prepared (ketones used, % yield of XIV, and m.p. given): III, 50, 95°; IV, 62, 113°; V 4, 121°; VII, 50, 163°; VIII, 2, 172°; X, 5, 146°, XII, 50, 126°; XIII, 25, 121°.

IT 13278-31-4F

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 13278-31-4 HCAPLUS

CN [1,1'-Bicyclohexyl]-2-acetic acid,
1',2-dihydroxy-3',3',4,5',6,6-hexamethyl-, 1,1-dimethylethyl ester (CA
INDEX NAME)



L27 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1947:4829 HCAPLUS

DOCUMENT NUMBER: 41:4829

ORIGINAL REFERENCE NO.: 41:991h-i,992a-b

TITLE: Ketols from isophorones and their homologs

INVENTOR(S): Ballard, Seaver A.; Haury, Vernon E.

PATENT ASSIGNEE(S): Shell Development Co.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2406652		19460827	US 1941-390744	19410428

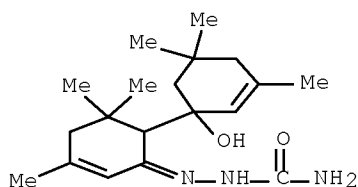
GI For diagram(s), see printed CA Issue.

AB The preparation of crystalline diisophorone (I), isomeric with the diisophorone prepared by Ruzicka (C.A. 15, 514) and found to be unfit for insecticidal compns., by the condensation of isophorone (II) in the presence of an alkali metal hydroxide catalyst is described. Thus from a mixture of II 4 and 60% aqueous NaOH 1 part, heated at 145° 1.5 hrs., with stirring, in a Ni kettle, the supernatant liquid cooled, decanted, and distilled at 1-2 mm., was obtained I, colorless, m. 83.5-4.5° (from EtOH); semicarbazone m. 205-8°. The converted II (about 61%) consisted by weight of 83.5% diisophorone, 10.5%

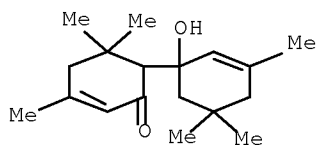
10/719,588

higher products, and 6% H₂O. NaOEt and solid NaOH can also be used as condensing agents. I is a useful insecticide, bactericide, fungicide, plasticizer, and synthetic intermediate.

IT 854726-52-6P, 2-Cyclohexen-1-one,
6-(1-hydroxy-3,5,5-trimethyl-2-cyclohexen-1-yl)-3,5,5-trimethyl-,
semicarbazone 854726-54-8P, 2-Cyclohexen-1-one,
6-(1-hydroxy-3,5,5-trimethyl-2-cyclohexen-1-yl)-3,5,5-trimethyl-
RL: PREP (Preparation)
(preparation of)
RN 854726-52-6 HCAPLUS
CN Hydrazinecarboxamide, 2-[6-(1-hydroxy-3,5,5-trimethyl-2-cyclohexen-1-yl)-
3,5,5-trimethyl-2-cyclohexen-1-ylidene]- (CA INDEX NAME)



RN 854726-54-8 HCAPLUS
CN 2-Cyclohexen-1-one, 6-(1-hydroxy-3,5,5-trimethyl-2-cyclohexen-1-yl)-3,5,5-trimethyl- (CA INDEX NAME)



SEARCH HISTORY

=> d his ful

(FILE 'HOME' ENTERED AT 13:13:18 ON 22 DEC 2008)

FILE 'HCAPLUS' ENTERED AT 13:13:28 ON 22 DEC 2008

```

E ANSMANN ACHIM/AU
L1      188 SEA ABB=ON  ("ANSMANN A"/AU OR "ANSMANN ACHIM"/AU OR "ANSMANN
      ACHIM DR"/AU OR "ANSMANN ACHIN"/AU)
      E BOTH SABINE/AU
L2      31 SEA ABB=ON  ("BOTH S"/AU OR "BOTH SABINE"/AU)
      E PRINZDANIEL/AU
      E PRINZ DANIELA/AU
L3      39 SEA ABB=ON  ("PRINZ D"/AU OR "PRINZ D K"/AU OR "PRINZ DANIELA"/
      AU)
      E SCHOEFFLER NICOLE/AU
L4      1 SEA ABB=ON  "SCHOEFFLER NICOLE"/AU
      E WESTFECHTEL ALFRED/AU
L5      105 SEA ABB=ON  ("WESTFECHTEL A"/AU OR "WESTFECHTEL ALFRED"/AU)
L6      0 SEA ABB=ON  L1 AND L2 AND L3 AND L4 AND L5
L7      350 SEA ABB=ON  L1 OR L2 OR L3 OR L4 OR L5
L8      6 SEA ABB=ON  L7 AND ?EMOLLIENT?
L9      6 SEA ABB=ON  L8 AND ?COSMETIC?
L10     0 SEA ABB=ON  L9 AND ?GEMINAL?
      SELECT RN L9 1-6

```

FILE 'REGISTRY' ENTERED AT 13:17:12 ON 22 DEC 2008

```

L11     28 SEA ABB=ON  (2163-42-0/BI OR 1332-29-2/BI OR 142-91-6/BI OR
      143-07-7/BI OR 22047-49-0/BI OR 29806-73-3/BI OR 5333-42-6/BI
      OR 7732-18-5/BI OR 105-99-7/BI OR 110-27-0/BI OR 110225-00-8/BI
      OR 112-10-7/BI OR 124-04-9/BI OR 137802-13-2/BI OR 137802-27-8
      /BI OR 1680-31-5/BI OR 17438-89-0/BI OR 17673-56-2/BI OR
      2425-77-6/BI OR 24251-86-3/BI OR 34316-64-8/BI OR 3913-02-8/BI
      OR 52623-82-2/BI OR 540730-50-5/BI OR 540731-01-9/BI OR
      62132-67-6/BI OR 68171-38-0/BI OR 765923-35-1/BI)
L12     0 SEA ABB=ON  L9 AND L11

```

FILE 'HCAPLUS' ENTERED AT 13:17:42 ON 22 DEC 2008

```

L13     5 SEA ABB=ON  L9 AND L11

```

FILE 'REGISTRY' ENTERED AT 13:18:58 ON 22 DEC 2008

```

L14     STR
L15     0 SEA SSS SAM L14
L16     0 SEA SSS FUL L14
L17     STR L14
L18     1 SEA SSS SAM L17
L19     4 SEA SSS FUL L17
L20     STR L17
L21     0 SEA SSS SAM L20
L22     0 SEA SSS FUL L20
L23     STR
L24     1 SEA SSS SAM L23
L25     7 SEA SSS FUL L23
L26     11 SEA ABB=ON  L19 OR L25

```

FILE 'HCAPLUS' ENTERED AT 13:24:14 ON 22 DEC 2008

```

L27     6 SEA ABB=ON  L26

```

FILE HOME

FILE HCAPLUS

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 22 Dec 2008 VOL 149 ISS 26
FILE LAST UPDATED: 21 Dec 2008 (20081221/ED)

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 21 DEC 2008 HIGHEST RN 1088138-51-5
DICTIONARY FILE UPDATES: 21 DEC 2008 HIGHEST RN 1088138-51-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>